

A PRELIMINARY KEY TO THE SPECIES OF *HYDROVATUS* OF THE EASTERN UNITED STATES

(Coleoptera: Dytiscidae)¹

By FRANK N. YOUNG

In the process of work on a revision of the dytiscid genus *Hydrovatus*, I have noted a number of interesting relationships between the described species. For example, the forms which we now call *pustulatus* Mel-sheimer and *compressus* Sharp apparently represent geographical sub-species of the Palaearctic *cuspidatus* Kunze. Intergradation between the two American forms occurs in the southeastern coastal plain states. *H. brevipes* Sharp from the west may belong to this complex. Also, *H. horni* Crotch, described from Texas, is suspected of being specifically identical with *major* Sharp, described from Guatemala. Since it seems that further work on this genus will be delayed for some time, I present the following preliminary key to the species so far described from the eastern United States west to Texas. I hope that this attempt at classification of the species will encourage further collecting which is needed to clarify the taxonomic problems in the genus.

KEY TO THE SPECIES OF *HYDROVATUS*

1. Size large; total length 2.9 to over 3.0 mm.....2
 Size smaller; total length about 2.1 to 2.75 mm.4
2. Elytron at side below the humeral prominence with a deep longitudinal sulcus; length over 3.0 mm. (Texas).....**horni** Crotch
 Elytra without marginal sulci, at most with a series of coarser punctures in a shallow longitudinal furrow below the humeral prominence.....3
3. Body form nearly hemispherical not much attenuate either behind or before; punctation and microsculpture somewhat finer; last visible abdominal sternite without a prominent median ridge; length about 2.9 to 3.1 mm.; width about 1.9 to 2.1 mm. (Peninsular Florida)**peninsularis** Young
 Body form more attenuate before and behind; punctation and microsculpture of dorsum coarse; color pattern of elytra more pronounced; last visible abdominal sternite in the type with a small, flattened median ridge, only vaguely indicated in Massachusetts specimens; length of type 3.05 mm.; width 1.94 mm. (Indiana, Massachusetts)**indianensis** Blatchley
4. Size small; length about 2.1 to 2.4 mm.; body form attenuate before and behind elytral punctation coarse irregularly distributed and sparse—a distinct longitudinal series of coarser punctures visible on disk of elytron in some specimens; humeral prominence distinct and beneath it a row of coarser punctures rather deeply impressed; venter piceous brown to almost black. (Arizona, Texas).....**dauidis** J. Balfour-Browne
 Size larger; elytral punctation finer and denser; body form less attenuate, the sides of pronotum more rounded; elytra without indication of striae of coarser punctures on disk; humeral prominence not conspicuous, the row of punctures beneath it often obliterated.5

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5. Length about 2.3 to 2.75 mm.; elytral punctures relatively finer and denser; color pattern usually pronounced; row of punctures below humeral prominence sometimes obliterated. (Eastern United States).....
*cuspidatus pustulatus* Melsheimer (new combination)
 Length about 2.2 to 2.4 mm.; elytral punctures relatively coarser and sparser; color pattern vague in teneral specimens; punctures below humeral prominence usually present. (Florida)*cuspidatus compressus* Sharp (new combination)

Recently Published

GYRINIDAE. A MONOGRAPH OF THE WHIRLIGIG BEETLES OF SOUTHERN AFRICA

BY PER BRINCK. [Results of the Lund University Expedition in 1950-1951.] South African Animal Life, Vol. 1, pp. 329-518, 81 text figs. Uppsala, 1955.

The strictly taxonomic part of this monograph is essential to workers who have Southern African specimens to identify, but all students of the Gyrinidae will find much of interest in the more general third and fourth sections, the ecological and zoogeographical accounts. Of special note are "The ecological adaptive zonation of evolving gyrinid genera" (pp. 477-479), "Species differentiation and habitat specialization" (pp. 491-498), "Flight and its importance" (pp. 498-501), and Zoogeographical account" (pp. 501-508).

The generic and subgeneric treatment of the Gyrininae and Enhydrinae follow Part I of his 1955 "A revision of the Gyrinidae (Coleoptera) of the Ethiopian Region" [see below], though the Ms. of the present paper was ready for the printer in 1953. But in the *Orectochili-*

nae, because of a somewhat unfortunate action on the part of Dr. F. Guignot (see pp. 4-5 of Part II of the Ethiopian revision for details, and Brinck's restrained comment), three of the 11 new subgenera of *Orectochilus* here described are already synonyms. It is interesting to compare the preliminary key to the subgenera in this paper with the later one in Part II of the work on Ethiopian Gyrinidae.

Users of the monograph on Southern African species should obtain also the "List of localities investigated by the Swedish Expedition to Southern Africa in 1950-1951," by Per Brinck and Gustaf Rudebeck. This is an annotated list with ecological data, and comprises Chapter II of *South African Animal Life* (i.e. Vol. 1, pp. 62-100, 2 figs., 5 maps). Chapter I (pp. 11-61, 7 figs.), "Swedish exploration of South African animal life during 200 years," is also by Per Brinck. Many of the itineraries are from unpublished diaries; most of the naturalists collected insects to some extent and the report makes excellent reading.—H. B. LEECH, *California Academy of Sciences*.